NASA Procedural Requirements

COMPLIANCE IS MANDATORY

NPR 7123.1A

Effective Date: March 26, 2007
Expiration Date: March 26, 2012

Printable Format (PDF)

Request Notification of Change   (NASA Only)

Subject: NASA Systems Engineering Processes and Requirements w/Change 1 (11/04/09)

Responsible Office: Office of the Chief Engineer

Chapter 6. Systems Engineering Management Plan

6.1 Systems Engineering Management Plan Function

6.1.1

The primary function of the SEMP is to provide the basis for implementing the technical effort and communicating what will be done, by whom, when, where, cost drivers, and why it is being done. In addition, the SEMP identifies the roles and responsibility interfaces of the technical effort and how those interfaces will be managed.

6.1.2

The SEMP is the vehicle that documents and communicates the technical approach including the application of the common technical processes; resources to be used; and key technical tasks, activities, and events along with their metrics and success criteria. The SEMP communicates the technical effort that will be performed by the assigned technical team to the team itself, managers, customers, and other stakeholders. Whereas the primary focus is on the applicable phase in which the technical effort will be done, the planning extends to a summary of the technical efforts that are planned for future applicable phases.

6.1.3

The SEMP is a "living" and tailorable document that captures a project?s current and

evolving systems engineering strategy and its relationship with the overall project management effort throughout the life cycle of the system. The SEMP?s purpose is to guide all technical aspects of the project.

6.1.4

The SEMP is consistent with higher level SEMPs and the project plan in accordance with NPR 7120.5.

6.1.5

The content of a SEMP for an in-house technical effort may differ from an external technical effort. For an external technical effort, the SEMP should include details on developing requirements for source selection, monitoring performance, and transferring and integrating externally produced products to NASA. (See Appendix D for further details.)

6.1.6

The SEMP provides the basis for generating the contractor engineering plan.

6.2 Roles and Responsibilities

6.2.1

Working with the program/project manager, the technical team shall determine the appropriate level within the system structure at which SEMPs are developed, taking into account factors such as number and complexity of interfaces, operating environments, and risk factors.

6.2.2

The technical team shall baseline the SEMP per the Center?s Implementation Plan incorporating the content of Appendix D, Systems Engineering Management Plan, prior to completion of Phase A in the program life cycle or the equivalent milestone. At the discretion of the PM and the DGA, for a small project the material in the SEMP can be placed in the project plan?s technical summary and the annotated outline in Appendix D used as a topic guide. As changes occur, the SEMP will be updated by the technical team, reviewed and concurred with by the PM, and presented at subsequent milestone reviews or their equivalent.

6.2.3

The DGA shall review and approve or disapprove the SEMP at each major milestone review or its equivalent.

6.2.4

The assigned technical team shall establish the initial SEMP early in the Formulation phase and update it as necessary to reflect changes in scope or improved technical

development.

6.2.5

The technical team shall ensure that any technical plans and discipline plans describe how the technical activities covered in the plans are consistent with the SEMP and are accomplished as fully integrated parts of the technical effort.

6.2.6

The technical team shall ensure that the project?s software development/management plan describes how the software activities are consistent with the SEMP and are accomplished as fully integrated parts of the technical effort. The required content of the project?s software development/management plan is provided in NPR 7150.2, dependent upon the classification of software items.

| TOC | ChangeLog | Preface | Chapter1 | Chapter2 | Chapter3 |
Chapter4 | Chapter5 | Chapter6 | AppendixA | AppendixB |
AppendixC | AppendixD | AppendixE | AppendixF | AppendixG |
AppendixH | AppendixI | ALL |

| NODIS Library | Program Formulation(7000s) | Search |

DISTRIBUTION:
NODIS